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10/084,596	02/27/2002	Dale E. Gulick	2000.051900	8995

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EXAMINER
WILLIAMS, JEFFERY L

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/084,596	GULICK, DALE E.
	Examiner	Art Unit	
	Jeffery Williams	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 March 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>51-65</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>51-65</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

1   **DETAILED ACTION**

2

3   This action is in response to the communication filed on 3/20/2007.

4 . Claims 51 – 65 are pending.

5

6   ***Continued Examination Under 37 CFR 1.114***

7

8   A request for continued examination under 37 CFR 1.114, including the fee set

9   forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

10 application is eligible for continued examination under 37 CFR 1.114, and the fee set

11 forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

12 has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

13 3/20/2007 has been entered.

14

15   All objections and rejections not set forth below have been withdrawn. As the

16 applicant has requested that further search and consideration be performed, the

17 examiner applies the following rejections.

18

19

20   ***Claim Rejections - 35 USC § 101***

21

22   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 61 – 65 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter. Specifically, these claims

recite instructions embodied within a signal. As a signal encoded with descriptive

material fails to falls within one of the four statutory categories of invention, these claims

are rejected as nonstatutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 51, 52, 54, 56, 57, 59, 61, and 64 are rejected under 35 U.S.C. 102(e)

as being anticipated by Heinrich et al. (Heinrich), U.S. Patent 6,199,167.

Regarding claim 51, Heinrich discloses:

receiving a request for an authentication, at a microcontroller included in a bridge

from a bus external to the bridge; requesting security data from a security device;

1   *receiving the security data from the security device, at the microcontroller (2:1-45; 3:51-*

2   *59; fig. 1:110-120).*

3   *evaluating the security data; and approving the authentication at the*

4   *microcontroller responsive to the security data being evaluated as acceptable (3:51-59;*

5   *fig. 1:110-120; 3:65-4:2).*

6

7   Regarding claim 52, Heinrich discloses:

8   *disapproving the authentication at the microcontroller responsive to the security*

9   *data being evaluated as unacceptable (3:65-4:2).*

10

11   Regarding claim 54, the combination of Heinrich discloses:

12   *wherein requesting security data from a security device comprises requesting the*

13   *security data from the security device over a direct connection between the security*

14   *device and the microcontroller; and wherein receiving the security data from the security*

15   *device, at the microcontroller, comprises receiving the security data from the security*

16   *device over the direct connection to the microcontroller (fig. 3:204, 203).*

17

18   Regarding claims 56, 57, 59, 61, and 64, they are the method steps and method

19   implemented on computer readable medium claims corresponding to the method claims

20   above, and are rejected, at least, for the same reasons.

21

22

1   *Claim Rejections - 35 USC § 103*

2

3   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

4   obviousness rejections set forth in this Office action:

5   (a) A patent may not be obtained though the invention is not identically disclosed or described as set
6   forth in section 102 of this title, if the differences between the subject matter sought to be patented and
7   the prior art are such that the subject matter as a whole would have been obvious at the time the
8   invention was made to a person having ordinary skill in the art to which said subject matter pertains.
9   Patentability shall not be negatived by the manner in which the invention was made.
10
11
12   **Claims 53, 55, 58, 60, 63, and 65 are rejected under 35 U.S.C. 103(a) as**

13   **being unpatentable over Heinrich.**

14

15   Regarding claims 55, 60, and 65, Heinrich discloses the submission of

16   authentication data by the user and that the user input may comprise biometric data (fig.

17   1:120; 2:16-37). While Heinrich discloses evaluating user input for authentication,

18   Heinrich does not contain an explicit statement that when the user input comprises

19   *biometric information*, the *biometric information* is evaluated. However, it would have

20   been obvious to one of ordinary skill in the art to recognize the need to evaluate the

21   biometric information when the user desiring authentication submits biometric

22   information. This would have been obvious as one of ordinary skill in the art would have

23   been motivated by the ability to reason logically that whenever biometric information is

24   submitted by a user desiring authentication, then this type of information should be

25   evaluated.

26

1   Regarding claims 53, 58, and 63, Heinrich does not explicitly state *wherein*

2   *evaluating the security data comprises requesting an indication of acceptability inside*

3   *SMM.* However, Heinrich discloses that for purposes of security, systems operate

4   within SMM (1:35-42; 4:3-28). Heinrich clearly enables for SMM to be apart of system

5   operation and for his method of verification as an enhancement to existing security

6   features.

7

8   **Claims 51, 52, 54 – 57, 59 – 62, 64, and 65 are rejected under 35**

9   **U.S.C. 102(e) as being anticipated by Flyntz, "Multi-Level Secure Computer With**

10   **Token-Based Access Control", U.S. Patent 6,389,542 in view of Angelo, "Method**

11   **and Apparatus for Allowing Access to Secured computer Resources by Utilizing a**

12   **Password and an External Encryption Algorithm", U.S. Patent 5,949,882.**

13

14   Regarding claim 51, Flyntz discloses:

15   *receiving a request for an authentication, at a microcontroller, requesting*

16   *security data from a security device; receiving the security data from the security device,*

17   *at the microcontroller* (Flyntz, col. 2, lines 52-56; col. 15, lines 5-20, 33-36, 53-55).

18   Flyntz discloses that a user requests authentication by supplying security data to the

19   microcontroller, which in turn processes such security data to evaluate acceptance.

20   *evaluating the security data; and approving the authentication at the*

21   *microcontroller responsive to the security data being evaluated as acceptable* (Flyntz,

22   col. 10, lines 33-40; col. 15, lines 21-65).

1   Flyntz discloses a microcontroller, serving to control the connection of the CPU to

2   devices located on system buses (Flyntz, fig. 2; col. 5, line 61 – col. 6, line 25; col. 15,

3   lines 21-32). The system of Flyntz allows for the provision of power to secure system

4   portions after a positive indication of acceptability has been received (Flyntz, Abstract;

5   col. 1, lines 55-63). The microcontroller receives a request for authentication via

6   connection to a security device (Flyntz, fig. 2:31). Flyntz, however, does not disclose

7   the microcontroller as *included in a bridge*.

8   Like Flyntz, Angelo discloses controlling circuitry to implement a secure power up

9   procedure for providing power to system portions on system buses, upon permission for

10   authorized users (Angelo, Abstract; col. 6, lines 44-50; col. 11, lines 17-45). Angelo

11   specifically discloses that the controlling circuitry used to accomplish this procedure is

12   included in the bridge, thus allowing the system to control the connection of the CPU to

13   devices located on system buses (Angelo, fig. 1-130; col. 5, lines 1-30).   The inclusion

14   of the above mentioned security features within the bridge allows for increased

15   hardware security, as security data may be entered via a secure communication path to

16   the bridge after a request for authentication has been received (Angelo, 2:39-43; 11:64-

17   12:9).

18   It would have been obvious to one of ordinary skill in the art to employ the secure

19   bridge implementation of Angelo for connecting devices on system buses along with the

20   security microcontroller of Flyntz for connecting devices on system buses. This would

21   have been obvious because one of ordinary skill in the art would have been motivated

22   by the showing of prior art that the above mentioned security features need not be

1 constructed as separate system components, but rather, may be feasibly included

2 within the existing computer system's bridge, thereby allowing the secure connection of

3 the CPU to devices located on buses (Angelo, fig. 2-130; col. 2, lines 39-43; 5:13-26;

4 10:33-54), as well as increased hardware security.

5   The combination of Flyntz and Angelo discloses the request being received from

6 a bus external to the bridge (Flyntz, fig. 2, elem. 31; Angelo, fig. 1:130).

7

8   Regarding claim 52, the combination of Flyntz and Angelo discloses:

9   *disapproving the authentication at the microcontroller responsive to the security*

10 *data being evaluated as unacceptable* (Flyntz, col. 2, lines 53-57; col. 10, lines 33-37;

11 15:21-65).

12

13   Regarding claim 53, the combination of Flyntz and Angelo discloses *wherein*

14 *evaluating the security data comprises requesting an indication of acceptability inside*

15 *SMM* (Angelo, Abstract; col. 6, lines 44-50; col. 5: 21-30; col. 11, lines 17-45).

16

17   Regarding claim 54, the combination of Flyntz and Angelo discloses:

18   *wherein requesting security data from a security device comprises requesting the*

19 *security data from the security device over a direct connection between the security*

20 *device and the microcontroller; and wherein receiving the security data from the security*

21 *device, at the microcontroller, comprises receiving the security data from the security*

22 *device over the direct connection to the microcontroller* (Flyntz, fig. 2, elem. 31, 32).

1   The combination of Flyntz and Angelo discloses a direct connection between the

2   security device and the microcontroller.

3

4   Regarding claim 55, the combination of Flyntz and Angelo discloses:

5   *wherein requesting security data from a security device comprises requesting*

6   *biometric data from a biometric device; wherein receiving the security data from the*

7   *security device, at the microcontroller, comprises receiving the biometric data from the*

8   *biometric device, at the microcontroller* (Flyntz, col. 2, lines 52-56; col. 15, lines 5-20,

9   33-36, 53-55; col. 6, lines 36-46).

10   *wherein evaluating the security data comprises evaluating the biometric data;*

11 *and wherein approving the authentication responsive to the security data being*

12 *evaluated as acceptable comprises approving the authentication responsive to the*

13 *biometric data being evaluated as acceptable* (Flyntz, col. 2, lines 52-56; col. 15, lines

14 5-20, 33-36, 53-55; col. 6, lines 36-46; col. 10, lines 33-40).

15

16   Regarding claims 56 – 65, they are the method steps and method implemented

17 on computer readable medium claims corresponding to the method claims above, and

18 are rejected, at least, for the same reasons.

19

20

1   ***Response to Arguments***

2

3   Applicant's arguments filed 8/15/07 have been fully considered but they are not

4   persuasive.

5

6   Applicant argues primarily that:

7

8   (i)   *... Flyntz does not describe or suggest receiving a request for an authentication*

9   *at a microcontroller <u>included in a bridge</u>, as set forth in independent claims 51, 56, and*

10   *61.* (Remarks, pg. 8)

11   In response to applicant's arguments against the references individually, one

12   cannot show nonobviousness by attacking references individually where the rejections

13   are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

14   USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

15   1986).

16

17   (ii)   *Flyntz also fails to describe or suggest that <u>the request is received from a bus</u>*

18   *<u>external to the bridge</u> ...* (Remarks, pg. 8)

19

20   In response to applicant's arguments against the references individually, one

21   cannot show nonobviousness by attacking references individually where the rejections

22   are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

1   USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

2   1986).

3

4   (iii)   *Flyntz also fails to describe or suggest that ...and that the* <u>*authentication is*</u>

5   <u>*approved at the microcontroller,*</u> (Remarks, pg. 8)

6

7   In response, the examiner respectfully notes that the applicant mischaracterizes

8   the prior art, and encourages the applicant to review the reference of Flyntz as well as

9   the above rejections, wherein it is shown that authentication is approved at the

10   microcontroller.

11

12   (iv)   *There is no suggestion in Angelo that the bridge 130 is anything but a*

13   *conventional bridge that merely converts signals formatted in accordance with the PCI*

14   *protocol to other supported protocols (ISA, ISE, etc.). Such conventional bridges do not*

15   *include microcontrollers. In fact, the entirety of the security functionality mentioned in*

16   *Angelo is performed by the microprocessor 102 ...* (Remarks, pg. 8)

17

18   In response, the examiner respectfully notes that the applicant mischaracterizes

19   the prior art, and encourages the applicant to review the cited prior art as well as the

20   above rejections (particularly, it would be helpful to note the portions cited by the

21   examiner). Therein it is seen that the applicant's assertion, essentially that the bridge in

22   prior art is nothing more than *"a conventional bridge"*, is without merit. Furthermore, the

1   examiner points out that if the applicant would find additional evidentiary teachings to be

2   helpful in understanding the disclosure of Angelo (for ex. regarding bridge 130), the

3   applicant may consider Angelo's own teachings (explicitly incorporated by reference -

4   Angelo, col. 4, lines 34-38) within U.S. Patent 5,748,888 (figs. 1 and 4: bridge 130).

5

6   (v)   The examiner points out that the applicant repeats similar arguments based upon

7   the arguments pointed out above (Remarks, pg. 9, 10). These arguments are noted to

8   be unpersuasive for the same reasons.

9

10   *Conclusion*

11

12   Claims 51 – 65 are rejected.

13

14   The prior art made of record and not relied upon is considered pertinent to

15   applicant's disclosure:

16

17   *See Notice of References Cited.*

18

19   , A shortened statutory period for reply is set to expire **3** months (not less than 90

20   days) from the mailing date of this communication.

1   Any inquiry concerning this communication or earlier communications from the

2   examiner should be directed to Jeffery Williams whose telephone number is (571) 272-

3   7965. The examiner can normally be reached on 8:30-5:00.

4   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

5   supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone

6   number for the organization where this application or proceeding is assigned is (703)

7   872-9306.

8   Information regarding the status of an application may be obtained from the

9   Patent Application Information Retrieval (PAIR) system. Status information for

10   published applications may be obtained from either Private PAIR or Public PAIR.

11   Status information for unpublished applications is available through Private PAIR only.

12   For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

13   you have questions on access to the Private PAIR system, contact the Electronic

14   Business Center (EBC) at 866-217-9197 (toll-free).

15

16
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18   AU 2137
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